

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 December 2000 (07.12.2000)

PCT

(10) International Publication Number
WO 00/73469 A3

(51) International Patent Classification⁷: **C12N 15/54**,
9/12, 15/11, 5/12, C07K 16/40, A61K 38/00, G01N 33/68

(74) Agent: **FOLEY & LARDNER**; Suite 500, 3000 K Street,
N.W., Washington, D.C. 20007-8696 (US).

(21) International Application Number: PCT/US00/14842

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE,
DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID,
IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL,
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ,
UA, UG, US, UZ, VN, YU, ZA, ZW.

(22) International Filing Date: 26 May 2000 (26.05.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/136,503 28 May 1999 (28.05.1999) US

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **SUGEN,
INC.** [US/US]; 230 East Grand Avenue, South San Fran-
cisco, CA 94080 (US).

Published:

— with international search report

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **PLOWMAN, Gre-
gory, D.** [US/US]; 4 Honeysuckle Lane, San Carlos, CA
94070 (US). **MARTINEZ, Ricardo** [US/US]; 984 Cartier
Lane, Foster City, CA 94404 (US). **WHYTE, David**
[US/US]; 2623 Barclay Way, Belmont, CA 94002 (US).
SUDERSANAM, Sucha [US/US]; 20 Corte Patencio,
Greenbrae, CA 94904 (US).

(88) Date of publication of the international search report:
29 November 2001

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*



WO 00/73469 A3

(54) Title: PROTEIN KINASES

(57) Abstract: The present invention relates to kinase polypeptides, nucleotide sequences encoding the kinase polypeptides, as well as various products and methods useful for the diagnosis and treatment of various kinase-related diseases and conditions.

BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/14842

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/54 C12N9/12 C12N15/11 C12N5/12 C07K16/40
A61K38/00 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K A61K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, EMBL, MEDLINE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! accession number W65887, 12 June 1996 (1996-06-12) MARRA M. ET AL.: "The WashU-HHMI mouse EST project." XP002157499 abstract DOC. AGAINST INV. 1 (SEQ.IDs. 122, 4) ---	2,6,7, 11,12
E	WO 00 58473 A (CURAGEN CORP ;LEACH MARTIN (US); SHIMKETS RICHARD A (US)) 5 October 2000 (2000-10-05) SEQ.IDs. 4435 and 4436 DOC. AGAINST INV. 1 (SEQ.IDs. 122, 4) SEQ.IDs. 5049, 5050, 5571, 5572 DOC. AGAINST INV. 67 (SEQ.IDs. 188, 70) SEQ.IDs. 3009 and 3010 DOC. AGAINST INV. 76 (SEQ.IDs. 197, 79) --- -/--	1,2,4-7, 11,12



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

22 June 2001

Date of mailing of the international search report

18. 07. 2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Mandl, B

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>RUIZ-PEREZ V. L. ET AL.: "Mutations in a new gene in Ellis-van Creveld syndrome and Weyers acrodermal dysostosis." NATURE GENETICS, vol. 24, no. 3, March 2000 (2000-03), pages 283-286, XP002157498 ISSN: 1061-4036 page 284, left-hand column, line 6 - line 8 figure 1A page 286, right-hand column, last paragraph & DATABASE EMBL 'Online! Accession Number Q9NY57, 1 October 2000 (2000-10-01) RUIZ-PEREZ V. V. ET AL.: "Serine/threonine protein kinase." abstract DOC. AGAINST INV. 1 (SEQ.IDs. 122, 4) ---</p>	1-12
X	<p>DATABASE EMBL 'Online! Accession Number AA305176, 18 April 1997 (1997-04-18) ADAMS M. D. ET AL.: "EST176172 colon carcinoma cell line II Homo sapiens cDNA 5'-end." XP002165842 abstract DOC. AGAINST INV. 3 (SEQ.IDs. 124, 6) ---</p>	6,7
X	<p>DATABASE EMBL 'Online! Accession Number AA116841, 16 November 1996 (1996-11-16) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:538568 5' similar to TR:G406058 protein kinase." XP002165843 abstract DOC. AGAINST INV. 4 (SEQ.IDs. 125, 7) ---</p>	1,2,4,6, 7,10-13, 15
P,X	<p>WO 00 06728 A (INCYTE PHARMA INC ; PATTERSON CHANDRA (US); AZIMZAI YALDA (US); COR) 10 February 2000 (2000-02-10) SEQ.ID.1 and 32 DOC. AGAINST INV. 4 (SEQ.IDs. 125, 7) ---</p>	2,4-7,9, 11-14, 26,27, 35,36
X	<p>WO 98 58052 A (INCYTE PHARMA INC ; CORLEY NEIL C (US); BANDMAN OLGA (US); GOLI SUR) 23 December 1998 (1998-12-23) SEQ.IDs. 4 and 11 DOC. AGAINST INV. 5 (SEQ.IDs. 126, 8) ---</p>	1-14, 26-30, 35-38
	-/--	

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 00 55332 A (INCYTE PHARMA INC ;AZIMZAI YALDA (US); YUE HENRY (US); AU YOUNG JA) 21 September 2000 (2000-09-21) SEQ.IDs. 7 and 21 DOC. AGAINST INV. 6 (SEQ.IDs. 127, 9) SEQ.IDs. 2 and 16 DOC. AGAINST INV. 26 (SEQ.IDs. 147, 29) ---	1-15, 26-30, 35-38
X	DATABASE EMBL 'Online! Accession Number AA593989, 24 September 1997 (1997-09-24) STRAUSBERG R.: "Homo sapiens clone IMAGE:1084047 3' similar to TR:G20878 serine/threonine protein kinase." XP002165844 abstract DOC. AGAINST INV. 6 (SEQ.IDs. 127, 9) ---	1,2,4,6, 7,10-13, 15
X	DATABASE EMBL 'Online! Accession Number AL050147, 20 May 1999 (1999-05-20) WAMBUTT R. ET AL.: "Homo sapiens mRNA." XP002165845 abstract DOC. AGAINST INV. 6 (SEQ.IDs. 127, 9) ---	6,7
X	HAYASHI A. ET AL.: "PKCnu, a new member of the protein kinase C family, composes a fourth subfamily with PKCmu." BIOCHIMICA ET BIOPHYSICA ACTA, vol. 1450, no. 1, 6 May 1999 (1999-05-06), pages 99-106, XP000992627 ISSN: 0006-3002 the whole document DOC. AGAINST INV. 8 (SEQ.IDs. 129, 11) ---	1-15, 35-38
X	DATABASE EMBL 'Online! Accession Number AA763046, 28 January 1998 (1998-01-28) MARRA M. ET AL.: "Mus musculus cDNA clone similar to TR:P70268 protein kinase." XP002165846 abstract DOC. AGAINST INV. 9 (SEQ.IDs. 130, 12) ---	2,6,7, 11,12
	--- -/--	

INTERNATIONAL SEARCH REPORT

Int .tional Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	OISHI K. ET AL.: "Identification and characterization of PKNbeta, a novel isoform of protein kinase PKN: Expression and arachidonic acid dependency are different from those of PKNalpha." BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 261, no. 3, 11 August 1999 (1999-08-11), pages 808-814, XP002165839 ISSN: 0006-291X figure 1 DOC. AGAINST INV. 9 (SEQ.IDs. 130, 12) ---	1-15,26, 27,35,37
X	DATABASE EMBL 'Online! Accession Number H19102, 2 July 1995 (1995-07-02) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:171993 5' similar to SP:F31E3.2 CE01267 protein kinase." XP002165847 abstract DOC. AGAINST INV. 11 (SEQ.IDs. 132, 14) ---	2,6,7, 11,12
X	WO 97 33909 A (CORIXA CORP) 18 September 1997 (1997-09-18) SEQ.IDs.6 and 16 DOC. AGAINST INV. 12 (SEQ.IDs. 133, 15) ---	2,6,7,9, 11,12, 26,27, 35-38
X	DATABASE EMBL 'Online! Accession Number AA463334, 13 June 1997 (1997-06-13) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:811660 5' similar to SW:COT1_NEUCR P38679 serine/threonine-protein kinase COT-1." XP002165848 abstract DOC. AGAINST INV. 12 (SEQ.IDs. 133, 15) ---	1,2,4,6, 7,10-13, 15
P,X	WO 99 57144 A (INCYTE PHARMA INC ;PATTERSON CHANDRA (US); AZIMZAI YALDA (US); RED) 11 November 1999 (1999-11-11) SEQ.IDs. 52 and 117 DOC. AGAINST INV. 12 (SEQ.IDs. 133, 15) --- -/--	2,6,7,9, 11,12, 26,27, 29,30, 35-38

INTERNATIONAL SEARCH REPORT

Int. Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	ZHANG H. ET AL.: "Cloning, characterization, and chromosome mapping of RPS6KC1, a novel putative member of the ribosome protein S6 kinase family, to chromosome 12q12-q13.1." GENOMICS, vol. 61, no. 3, 1 November 1999 (1999-11-01), pages 314-318, XP002165840 ISSN: 0888-7543 the whole document DOC. AGAINST INV. 12 (SEQ.IDs. 133, 15) ---	1-15,35
X	DATABASE EMBL 'Online! Accession Number AC006530, 8 February 1999 (1999-02-08) ROWEN L. ET AL.: "Sequencing of human chromosome 14." XP002165849 abstract DOC. AGAINST INV. 14 (SEQ.IDs. 135, 17) ---	1,2,4-7, 10-15
X	DATABASE EMBL 'Online! Accession Number AI215680, 23 October 1998 (1998-10-23) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:1884219." XP002165850 abstract DOC. AGAINST INV. 14 (SEQ.IDs. 135, 17) ---	6,7
X	WO 98 11234 A (HAWKINS PHILLIP R ; INCYTE PHARMA INC (US); AU YOUNG JANICE (US); G) 19 March 1998 (1998-03-19) SEQ.IDs. 5 and 6 DOC. AGAINST INV. 15 (SEQ.IDs. 136, 18) DOC. AGAINST INV. 16 (SEQ.IDs. 137, 19) ---	1-15, 26-30, 35-38
X	EP 0 861 896 A (DADE BEHRING MARBURG GMBH) 2 September 1998 (1998-09-02) SEQ.IDs. 1 and 2 DOC. AGAINST INV. 15 (SEQ.IDs. 136, 18) DOC. AGAINST INV. 16 (SEQ.IDs. 137, 19) ---	1-15, 26-28, 35-38
P,X	DATABASE EMBL 'Online! Accession Number AF205855, 23 December 1999 (1999-12-23) SHIGAEV A. ET AL.: "Mus musculus serum and glucocorticoid-dependent protein kinase (Sgk) mRNA." XP002165851 abstract DOC. AGAINST INV. 16 (SEQ.IDs. 137, 19) ---	1,2,4,6, 7,10-13, 15

-/--

INTERNATIONAL SEARCH REPORT

Int. Application No.
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 00 35946 A (UNIV DUNDEE ; COHEN PHILIP (GB); DEAK MARIA (GB); KOBAYASHI TAKAYAS) 22 June 2000 (2000-06-22) figure 11 DOC. AGAINST INV. 17 (SEQ.IDs. 138, 20) DOC. AGAINST INV. 113 (SEQ.IDs. 234, 116) ---	1-14, 26, 27, 29, 30
X	DATABASE EMBL 'Online! Accession Number Z98752, 23 August 1997 (1997-08-23) RAMSAY H.: "Human DNA sequence from clone RP1-138B7 on chromosome 20q13.12." XP002165852 abstract DOC. AGAINST INV. 17 (SEQ.IDs. 138, 20) ---	1-14
X	WO 98 31802 A (GENETICS INST) 23 July 1998 (1998-07-23) SEQ.IDs. 13 and 14 DOC. AGAINST INV. 21 (SEQ.IDs. 142, 24) ---	6, 7, 11, 12
X	DATABASE EMBL 'Online! Accession Number AI061003, 23 July 1998 (1998-07-23) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:1379597 5' similar to TR:008875 calcium calmodulin dependent kinase CPG16." XP002165853 abstract DOC. AGAINST INV. 22 (SEQ.IDs. 143, 25) ---	1, 2, 4, 6, 7, 10-13, 25
X	DATABASE EMBL 'Online! Accession Number AA383293, 18 April 1997 (1997-04-18) ADAMS M. D. ET AL.: "Homo sapiens cDNA 5'-end similar to serine/threonine kinase p78." XP002165854 abstract DOC. AGAINST INV. 23 (SEQ.IDs. 144, 26) ---	1, 2, 4, 6, 7, 10-13, 16
X	DATABASE EMBL 'Online! Accession number AA197883, 29 January 1997 (1997-01-29) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:654045 5' similar to TR:G406113 protein kinase I." XP002165855 abstract DOC. AGAINST INV. 24 (SEQ.IDs. 145, 27) ---	1, 2, 4, 6, 7, 10-13
	-/--	

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 99 50395 A (HELIX RESEARCH INST ;MURAMATSU MASAOKI (JP); TOKUMITSU HIROSHI (JP) 7 October 1999 (1999-10-07) page 41 -page 51 DOC. AGAINST INV. 24 (SEQ.IDs. 145, 27) ---	1-4,6-13
X	SANJO H. ET AL: "DRAKs, novel serine/threonine kinases related to death-associated protein kinase that trigger apoptosis." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 273, no. 44, 30 October 1998 (1998-10-30), pages 29066-29071, XP002165841 ISSN: 0021-9258 figure 1 DOC. AGAINST INV. 26 (SEQ.IDs. 147, 29) ---	1-14,16, 35,37
P, X	WO 99 33961 A (AKIRA SHIZUO ;KAWAI TARO (JP); ASAHI CHEMICAL IND (JP)) 8 July 1999 (1999-07-08) SEQ.IDs. 5 and 6 DOC. AGAINST INV. 26 (SEQ.IDs. 147, 29) SEQ.IDs. 29 and 30 DOC. AGAINST INV. 40 (SEQ.IDs. 161, 43) ---	1-14,16, 26,27, 29,30, 35,37
X	NAGASE T. ET AL.: "PREDICTION OF THE CODING SEQUENCE OF UNIDENTIFIED HUMAN GENES. XIII. THE COMPLETE SEQUENCE OF 100 NEW CDNA CLONES FROM BRAIN WHICH CODE FOR LARGE PROTEINS IN VITRO" DNA RESEARCH, vol. 6, 26 February 1999 (1999-02-26), pages 63-70, XP000952912 ISSN: 1340-2838 the whole document -& DATABASE EMBL 'Online! Accession Number AB023153, 9 April 1999 (1999-04-09) NAGASE T. ET AL.: "Homo sapiens mRNA for KIAA0936 protein." XP002166242 abstract DOC. AGAINST INV. 54 (SEQ.IDs. 175, 57) -& DATABASE EMBL 'Online! Accession Number AB023216, 9 April 1999 (1999-04-09) NAGASE T. ET AL.: "Homo sapiens mRNA for KIAA0999 protein." XP002166243 abstract DOC. AGAINST INV. 28 (SEQ.IDs. 149, 31) ---	1,2,4-7, 10-14, 16,19
	--- -/--	

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 01756 A (UNIV WASHINGTON) 15 January 1998 (1998-01-15) SEQ.IDs. 1 and 2 DOC. AGAINST INV. 30 (SEQ.IDs. 151, 33) ---	1-14,16, 26,27, 35,36
X	DATABASE EMBL 'Online! Accession Number W90839, 9 July 1996 (1996-07-09) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:420441 5' similar to gb:M80359 putative serine/threonine protein kinase." XP002165856 abstract DOC. AGAINST INV. 31 (SEQ.IDs. 152, 34) ---	1,2,4,6, 7,10-13, 16
X	NAGASE T. ET AL.: "PREDICTION OF THE CODING SEQUENCES OF UNIDENTIFIED HUMAN GENES. IV. THE CODING SEQUENCES OF 40 NEW GENES (KIAA0121-KIAA0160) DEDUCED BY ANALYSIS OF CDNA CLONES FROM HUMAN CELL LINE KG-1" DNA RESEARCH, vol. 2, no. 4, 31 August 1995 (1995-08-31), pages 167-174, XP000676653 ISSN: 1340-2838 the whole document -& DATABASE ' EMBL 'Online! Accession Number D50925, 1 August 1996 (1996-08-01) NAGASE T. ET AL.: "Human mRNA for KIAA0135 gene." XP002166244 abstract DOC. AGAINST INV. 32 (SEQ.IDs. 153, 35) DOC. AGAINST INV. 33 (SEQ.IDs. 154, 36) ---	1,2,4-7, 10-14,16
X	DATABASE EMBL 'Online! Accession Number U79240, 14 December 1996 (1996-12-14) YU W. ET AL.: "Human serine/threonine kinase mRNA." XP002165857 abstract DOC. AGAINST INV. 33 (SEQ.IDs. 154, 36) ---	1,2,4-7, 10-14
	--- -/--	

INTERNATIONAL SEARCH REPORT

Int. Patent Application No.
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! Accession Number AI036899, 29 June 1998 (1998-06-29) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:1746011 5' similar to TR:Q99763 serine/threonine protein kinase." XP002165858 abstract DOC. AGAINST INV. 33 (SEQ.IDs. 154, 36) ---	1,2,4,6, 7,10-13
X	DATABASE EMBL 'Online! Accession Number AI469033, 17 March 1999 (1999-03-17) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:2137322." XP002165859 abstract DOC. AGAINST INV. 35 (SEQ.IDs. 156, 38) ---	6,7
X	DATABASE EMBL 'Online! Accession Number AC007225, 7 April 1999 (1999-04-07) BRUCE D. ET AL.: "Homo sapiens chromosome 16 clone RPCI-11_480G7." XP002166245 abstract DOC. AGAINST INV. 37 (SEQ.IDs. 158, 40) ---	6,7
P,X	WO 99 49062 A (FAN WUFANG ;GENE LOGIC INC (US); PRASHAR YATINDRA (US)) 30 September 1999 (1999-09-30) SEQ.IDs. 1 and 2 DOC. AGAINST INV. 37 (SEQ.IDs. 158, 40) DOC. AGAINST INV. 55 (SEQ.IDs. 176, 58) ---	1-14, 26-30, 35-38
X	DATABASE EMBL 'Online! Accession Number AI596766, 26 April 1999 (1999-04-26) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:949322 5' similar to WP:ZC373.4 CE02377 myosin-light-chain kinase domain." XP002166246 abstract DOC. AGAINST INV. 38 (SEQ.IDs. 159, 41) DOC. AGAINST INV. 39 (SEQ.IDs. 160, 42) ---	1,2,4,6, 7,10-13, 16
	-/--	

INTERNATIONAL SEARCH REPORT

Int. l. Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	<p>NAGASE T. ET AL.: "PREDICTION OF THE CODING SEQUENCES OF UNIDENTIFIED HUMAN GENES. XVI. THE COMPLETE SEQUENCES OF 150 NEW CDNA CLONES FROM BRAIN WHICH CODE FOR LARGE PROTEINS IN VITRO"</p> <p>DNA RESEARCH, vol. 7, 28 February 2000 (2000-02-28), pages 65-73, XP000923011 KIAA1297</p> <p>-& DATABASE EMBL 'Online! Accession Number AB037718, 14 March 2000 (2000-03-14)</p> <p>OHARA O. ET AL.: "Homo sapiens mRNA for KIAA1297 protein." XP002166247 abstract</p> <p>DOC. AGAINST INV. 38 (SEQ.IDs. 159, 41) DOC. AGAINST INV. 39 (SEQ.IDs. 160, 42)</p> <p>-& DATABASE EMBL 'Online! Accession Number AB037759, 14 March 2000 (2000-03-14)</p> <p>OHARA O. ET AL.: "Homo sapiens mRNA for KIAA1338 protein." XP002167889 abstract</p> <p>DOC. AGAINST INV. 67 (SEQ.IDs. 188, 70)</p> <p>-& DATABASE EMBL 'Online! Accession Number AB037790, 14 March 2000 (2000-03-14)</p> <p>OHARA O. ET AL.: "Homo sapiens mRNA for KIAA1369 protein." XP002167890 abstract</p> <p>DOC. AGAINST INV. 68 (SEQ.IDs. 189, 71)</p> <p>-& DATABASE EMBL 'Online! Accession Number AB037781, 14 March 2000 (2000-03-14)</p> <p>NAGASE T. ET AL.: "Homo sapiens mRNA for KIAA1360 protein, partial cds." XP002168226 abstract</p> <p>DOC. AGAINST INV. 82 (SEQ.IDs. 203, 85)</p> <p>---</p>	1,2,4-7, 10-14, 16,25
X	<p>KAWAI T. ET AL.: "Duet is a novel serine/threonine kinase with Dbl-Homology (DH) and Pleckstrin-Homology (PH) domains" GENE, vol. 227, no. 2, 18 February 1999 (1999-02-18), pages 249-255, XP004158739 ISSN: 0378-1119 the whole document</p> <p>DOC. AGAINST INV. 40 (SEQ.IDs. 161, 43)</p> <p>---</p> <p>-/--</p>	1-14,29, 30,35-38

INTERNATIONAL SEARCH REPORT

Int. Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL 'Online! Accession Number AA454060, 11 June 1997 (1997-06-11) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:795492 5' similar to TR:G49075 calmodulin-binding protein." XP002166248 abstract DOC. AGAINST INV. 41 (SEQ.IDs. 162, 44)</p> <p>---</p>	6,7
X	<p>DATABASE EMBL 'Online! Accession Number AI385971, 29 January 1999 (1999-01-29) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:514336 5' similar to WP:R90.1 CE06325 protein kinase." XP002166249 abstract DOC. AGAINST INV. 43 (SEQ.IDs. 164, 46)</p> <p>---</p>	1,2,4,6, 7,10-13, 16
X	<p>DATABASE EMBL 'Online! Accession Number AA436054, 1 June 1997 (1997-06-01) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:730582 5' similar to gb:X66363 serine/threonine-protein kinase pctaie-1" XP002166250 abstract DOC. AGAINST INV. 44 (SEQ.IDs. 165, 47)</p> <p>---</p>	1,2,4-7, 10-14,16
X	<p>DATABASE EMBL 'Online! Accession Number AA061797, 24 September 1996 (1996-09-24) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:513953 5' similar to gb:X66358 serine/threonine-protein kinase." XP002166251 abstract DOC. AGAINST INV. 45 (SEQ.IDs. 166, 48) DOC. AGAINST INV. 46 (SEQ.IDs. 167, 49)</p> <p>---</p>	1,2,4,6, 7,10-13, 17
A	<p>WO 98 35015 A (GERHOLD DAVID L ;MERCK & CO INC (US)) 13 August 1998 (1998-08-13) SEQ.IDs.2 and 3 DOC. AGAINST INV. 50 (SEQ.IDs. 171, 53) DOC. AGAINST INV. 114 (SEQ.IDs. 235, 117)</p> <p>---</p> <p style="text-align: center;">-/--</p>	1-30, 35-38

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NAYLER O. ET AL.: "Characterization and comparison of four serine- and arginine-rich (SR) protein kinases." BIOCHEMICAL JOURNAL, vol. 326, no. 3, 1997, pages 693-700, XP002166240 ISSN: 0264-6021 the whole document DOC. AGAINST INV. 51 (SEQ.IDs. 172, 54) ---	1-4, 6-13, 18, 26, 27
P, X	WO 99 38981 A (AKERBLOM INGRID E ; INCYTE PHARMA INC (US); CORLEY NEIL C (US); BAN) 5 August 1999 (1999-08-05) SEQ.IDs. 3 and 9 DOC. AGAINST INV. 51 (SEQ.IDs. 172, 54) SEQ.IDs. 6 and 12 DOC. AGAINST INV. 95 (SEQ.IDs. 216, 43) ---	1-14, 18, 26-30, 35-38
X	DATABASE EMBL 'Online! Accession Number AA839940, 2 March 1998 (1998-03-02) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:1259911 5' similar to SW:KMLC_RAT P20689 myosin light chain kinase." XP002167891 abstract DOC. AGAINST INV. 55 (SEQ.IDs. 176, 58) ---	1, 2, 4, 6, 7, 10-13, 18
X	DATABASE EMBL 'Online! Accession Number AL031055, 10 July 1998 (1998-07-10) RAMSAY H.: "Human DNA sequence from clone RP1-28H20 on chromosome 20q13.1." XP002167892 abstract DOC. AGAINST INV. 56 (SEQ.IDs. 177, 59) ---	1, 2, 4-7, 10-14, 18
P, X	DATABASE EMBL 'Online! Accession Number AL137662, 27 January 2000 (2000-01-27) KOEHRER K. ET AL.: "Homo sapiens mRNA" XP002167893 abstract DOC. AGAINST INV. 57 (SEQ.IDs. 178, 60) ---	2, 6, 7, 11, 12
	--- -/--	

INTERNATIONAL SEARCH REPORT

Int. l. Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>NAGASE T. ET AL.: "Prediction of the coding sequences of unidentified human genes. VII. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro"</p> <p>DNA RESEARCH, vol. 4, no. 4, 28 April 1997 (1997-04-28), pages 141-150, XP002102085 ISSN: 1340-2838 the whole document -& DATABASE EMBL 'Online! Accession Number AB002342, 1 July 1997 (1997-07-01) NAGASE T. ET AL.: "Human mRNA for KIAA0344 gene." XP002167894 abstract DOC. AGAINST INV. 59 (SEQ.IDs. 180, 62)</p>	2,6,7, 11,12
X	<p>WO 98 36054 A (HOOPER JOHN DAVID ;AMRAD OPERATIONS PTY LTD (AU); ANTALIS TONI MAR) 20 August 1998 (1998-08-20) SEQ.IDs. 9 and 10 DOC. AGAINST INV. 60 (SEQ.IDs. 181, 63)</p>	1-14, 26-30, 35-38
X	<p>ANDERSON K. A. ET AL.: "Components of a calmodulin-dependent protein kinase cascade. Molecular cloning, functional characterization and cellular localization of Ca2+/calmodulin-dependent protein kinase kinase beta."</p> <p>JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 273, no. 48, 27 November 1998 (1998-11-27), pages 31880-31889, XP002167887 ISSN: 0021-9258 the whole document -& DATABASE EMBL 'Online! Accession Number AF140507, 21 May 1999 (1999-05-21) ANDERSON K. A. ET AL.: "Homo sapiens Ca2+/calmodulin-dependent protein kinase beta, complete cds." XP002167895 abstract DOC. AGAINST INV. 62 (SEQ.IDs. 183, 65)</p>	1-14,23, 26,27
P,X	<p>WO 99 58558 A (INCYTE PHARMA INC ;PATTERSON CHANDRA (US); YUE HENRY (US); BANDMAN) 18 November 1999 (1999-11-18) SEQ.IDs. 2 and 15 DOC. AGAINST INV. 62 (SEQ.IDs. 183, 65)</p>	2,6,7,9, 11,12, 26-28

-/--

INTERNATIONAL SEARCH REPORT

Int lional Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! Accession Number AC004685, 15 May 1998 (1998-05-15) ADAMS M. D. AND LOFTUS B. J.: "Homo sapiens chromosome 16 BAC clone CIT987SK-A-233A8." XP002167896 abstract DOC. AGAINST INV. 63 (SEQ.IDs. 184, 66) ---	1,2,4-7
P,X	US 6 013 455 A (AZIMZAI YALDA ET AL) 11 January 2000 (2000-01-11) SEQ.IDs. 2 and 11 DOC. AGAINST INV. 63 (SEQ.IDs. 184, 66) ---	1-14, 26-30, 35-38
X	EP 0 870 825 A (SMITHKLINE BEECHAM CORP) 14 October 1998 (1998-10-14) figure 2 DOC. AGAINST INV. 65 (SEQ.IDs. 186, 68) DOC. AGAINST INV. 66 (SEQ.IDs. 187, 69) ---	1-14, 25-30, 35-38
X	DATABASE EMBL 'Online! Accession Number AA589241, 18 September 1997 (1997-09-18) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:992145 5' similar to WP:F49E11.1 CE05897 serine/threonine protein kinase." XP002167897 abstract DOC. AGAINST INV. 66 (SEQ.IDs. 187, 69) ---	1,2,4,6, 7,10-13, 25
P,X	BERLANGA J. J. ET AL.: "Characterization of a mammalian homolog of the GCN2 eukaryotic initiation factor 2alpha kinase." EUROPEAN JOURNAL OF BIOCHEMISTRY, vol. 265, no. 2, October 1999 (1999-10), pages 754-762, XP002167888 ISSN: 0014-2956 the whole document DOC. AGAINST INV. 67 (SEQ.IDs. 188, 70) ---	1-14, 25-27,35
X	WO 94 05794 A (MASSACHUSETTS INST TECHNOLOGY) 17 March 1994 (1994-03-17) page 13, paragraph 2 examples 1,2 DOC. AGAINST INV. 68 (SEQ.IDs. 189, 71) --- -/--	1-14, 26-28, 35-38

INTERNATIONAL SEARCH REPORT

Int. .ional Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MELLOR H. ET AL.: "CLONING AND CHARACTERIZATION OF CDNA ENCODING RAT HEMIN-SENSITIVE INITIATION FACTOR-2ALPHA (EIF-2ALPHA) KINASE" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 269, no. 14, 8 April 1994 (1994-04-08), pages 10201-10204, XP002920790 ISSN: 0021-9258 the whole document DOC. AGAINST INV. 68 (SEQ.IDs. 189, 71) ---	1-4,6-13
X	DATABASE EMBL 'Online! Accession Number AA387681, 25 June 1997 (1997-06-25) MARRA M. ET AL.: "Mus musculus cDNA clone." XP002167898 abstract DOC. AGAINST INV. 70 (SEQ.IDs. 191, 73) ---	6,7
P,X	WO 00 09678 A (TULARIK INC) 24 February 2000 (2000-02-24) the whole document DOC. AGAINST INV. 71 (SEQ.IDs. 192, 74) ---	1-14,20, 26,27, 29,30, 35-38
X	DATABASE EMBL 'Online! Accession Number AF046653, 6 April 1998 (1998-04-06) ZAMBROWICZ B. P. ET AL.: "Mus musculus genomic clone OST10140." XP002167969 abstract DOC. AGAINST INV. 76 (SEQ.IDs. 197, 79) ---	1-4, 6-13,25
P,X	DATABASE EMBL 'Online! Accession Number AF238255, 12 April 2000 (2000-04-12) LIU T. C. ET AL.: "Homo sapiens mixed lineage kinase mRNA." XP002167970 abstract -& LIU T.-C. ET AL.: "Cloning and expression of ZAK, a mixed lineage kinase-like protein containing a leucine-zipper and a sterile-alpha motif." BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 274, 11 August 2000 (2000-08-11), pages 811-816, XP002167968 the whole document DOC. AGAINST INV. 77 (SEQ.IDs. 198, 80) --- -/--	1-14

INTERNATIONAL SEARCH REPORT

 Int. .ional Application No
 PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 00 14212 A (ACTON SUSAN ;MILLENNIUM PHARM INC (US)) 16 March 2000 (2000-03-16) figure 2 DOC. AGAINST INV. 77 (SEQ.IDs. 198, 80) figure 3 DOC. AGAINST INV. 106 (SEQ.IDs. 227, 109) ---	1-14, 25-30, 35-38
X	DATABASE EMBL 'Online! Accession Number AA270784, 28 March 1997 (1997-03-28) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:736476." XP002167971 abstract DOC. AGAINST INV. 80 (SEQ.IDs. 201, 83) ---	6,7
P,X	PAZDERNIK N. J. ET AL.: "MOUSE RECEPTOR INTERACTING PROTEIN 3 DOES NOT CONTAIN A CASPASE-RECRUITING OR A DEATH DOMAIN BUT INDUCES APOPTOSIS AND ACTIVATES NF-(KAPPA)B" MOLECULAR AND CELLULAR BIOLOGY, vol. 19, no. 10, October 1999 (1999-10), pages 6500-6508, XP000939146 the whole document DOC. AGAINST INV. 80 (SEQ.IDs. 201, 83) ---	1-4, 6-13,22
X	DATABASE EMBL 'Online! Accession Number AL031297, 13 August 1998 (1998-08-13) COBLEY V.: "Human DNA sequence from clone 97P20 on chromosome1q23.2-24.3." XP002168227 abstract DOC. AGAINST INV. 81 (SEQ.IDs. 202, 84) ---	1-14
X	WO 99 04265 A (SAHIN UGUR ;TURECI OZLEM (DE); PFREUNDSCHUH MICHAEL (DE); GOUT IVA) 28 January 1999 (1999-01-28) SEQ.IDs. 431 and 435 DOC. AGAINST INV. 82 (SEQ.IDs. 203, 85) ---	2,6,7, 11,12
X	DATABASE EMBL 'Online! Accession Number AA195964, 28 January 1997 (1997-01-28) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:628136" XP002168228 abstract DOC. AGAINST INV. 84 (SEQ.IDs. 205, 87) --- -/--	6,7

INTERNATIONAL SEARCH REPORT

Int. .ional Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>DATABASE EMBL 'Online! Accession Number AK000342, 22 February 2000 (2000-02-22) SUGANO S. ET AL.: "Homo sapiens cDNA FLJ20335 fis, clone HEP11429." XP002168229 abstract DOC. AGAINST INV. 84 (SEQ.IDs. 205, 87)</p>	1-14
X	<p>DATABASE EMBL 'Online! Accession Number AF027406, 6 January 1999 (1999-01-06) BRENNER V. ET AL.: "Homo sapiens muscle-specific serine kinase 1 (MSSK1) mRNA." XP002168230 abstract DOC. AGAINST INV. 85 (SEQ.IDs. 206, 88)</p>	1-14
X	<p>DATABASE EMBL 'Online! Accession Number AF043288, 6 January 1999 (1999-01-06) BRENNER V. ET AL.: "Mus musculus muscle-specific serine kinase 1 mRNA." XP002168231 abstract DOC. AGAINST INV. 85 (SEQ.IDs. 206, 88)</p>	1-4,6-13
P,X	<p>WO 00 22143 A (INCYTE PHARMA INC ;AZIMZAI YALDA (US); CORLEY NEIL C (US); YUE HEN) 20 April 2000 (2000-04-20) SEQ.IDs. 1 and 10 DOC. AGAINST INV. 85 (SEQ.IDs. 206, 88) SEQ.IDs. 7 and 16 DOC. AGAINST INV. 104 (SEQ.IDs. 225, 107)</p>	1-4, 6-13, 26-28
X	<p>DATABASE EMBL 'Online! Accession Number AI553938, 25 March 1999 (1999-03-25) STAUSBERG R.: "Homo sapiens cDNA clone IMAGE:2090493 3' similar to TR:015367 TSK_1." XP002168388 abstract DOC. AGAINST INV. 86 (SEQ.IDs. 207, 89) DOC. AGAINST INV. 87 (SEQ.IDs. 208, 90) DOC. AGAINST INV. 91 (SEQ.IDs. 212, 94)</p>	1,2,4-7, 10-14,25

-/--

INTERNATIONAL SEARCH REPORT

Int. ional Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL 'Online! Accession Number AV040939, 14 May 1999 (1999-05-14) CARNINCI P. ET AL.: "Mus musculus adult male testis cDNA, partial sequence." XP002168389 abstract DOC. AGAINST INV. 87 (SEQ.IDs. 208, 90)</p> <p>---</p>	6,7
X	<p>DATABASE EMBL 'Online! Accession Number AA399596, 29 April 1997 (1997-04-29) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:729913 5' similar to TR:G404634 Serine/threonine kinase." XP002168766 abstract DOC. AGAINST INV. 88 (SEQ.IDs. 209, 91)</p> <p>---</p>	1,2,4-7, 10-14,25
X	<p>KUENG P. ET AL: "A novel family of serine/threonine kinases participating in spermiogenesis." JOURNAL OF CELL BIOLOGY, vol. 139, no. 7, 29 December 1997 (1997-12-29), pages 1851-1859, XP002168387 ISSN: 0021-9525 the whole document DOC. AGAINST INV. 89 (SEQ.IDs. 210, 92)</p> <p>---</p>	1-14, 26-28, 35-38
X	<p>DATABASE EMBL 'Online! Accession Number AI652441, 5 May 1999 (1999-05-05) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:2307063 3' similar to TR:P97417 serine/threonine kinase" XP002168390 abstract DOC. AGAINST INV. 89 (SEQ.IDs. 210, 92)</p> <p>---</p>	1,2,4-7, 10-14
X	<p>DATABASE EMBL 'Online! Accession Number L77564, 16 June 1996 (1996-06-16) GONG W. ET AL.: "Homo sapiens DGS-G mRNA, 3'-end." XP002168391 abstract DOC. AGAINST INV. 89 (SEQ.IDs. 210, 92)</p> <p>---</p> <p style="text-align: center;">-/--</p>	1,2,4-7, 10-14

INTERNATIONAL SEARCH REPORT

Int. lional Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! Accession Number AA905446, 9 April 1998 (1998-04-09) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:1506197 3' similar to TR:P97417 serine threonine kinase." XP002168767 abstract DOC. AGAINST INV. 91 (SEQ.IDs. 212, 9) DOC. AGAINST INV. 86 (SEQ.IDs. 207, 89) ---	1,2,4-7, 10-14,25
X	DATABASE EMBL 'Online! Accession Number AI538521, 24 March 1999 (1999-03-24) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:2074994 3' similar to SW:UN51_CAEEL Q23023 serine/threonine protein kinase UNC-51" XP002168768 abstract DOC. AGAINST INV. 92 (SEQ.IDs. 213, 95) DOC. AGAINST INV. 93 (SEQ.IDs. 214, 96) ---	1,2,4-7, 10-14,25
X	DATABASE EMBL 'Online! Accession Number AA498104, 3 July 1997 (1997-07-03) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:918101." XP002168769 abstract DOC. AGAINST INV. 93 (SEQ.IDs. 214, 96) ---	6,7
X	DATABASE EMBL 'Online! Accession Number AA215311, 5 February 1997 (1997-02-05) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:63368 5' similar to TR:E237261 calmodulin-domain protein kinase." XP002168770 abstract DOC. AGAINST INV. 94 (SEQ.IDs. 215, 97) ---	1,2,4-7, 10-14
P,X	WO 99 32609 A (KAROLINSKA INNOVATIONS AB ;ZAPHIROPOULOS PETER G (SE); TOFTGAARD R) 1 July 1999 (1999-07-01) SEQ.IDs. 1 and 2 DOC. AGAINST INV. 95 (SEQ.IDs. 216, 98) ---	1-14,18, 26-28, 35-38
	--- -/--	

INTERNATIONAL SEARCH REPORT

Int. l. Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! Accession Number AA018361, 10 August 1996 (1996-08-10) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:361543 5' similar to SW:ASK1_ARATH P43291 serine/threonine kinase ASK2." XP002169144 abstract DOC. AGAINST INV. 95 (SEQ.IDs. 216, 98) ---	1,2,4-7, 10-14,18
X	DATABASE EMBL 'Online! Accession Number AI651075, 5 May 1999 (1999-05-05) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:2304078 3' similar to TR:060679 serum inducible kinase." XP002169145 abstract DOC. AGAINST INV. 97 (SEQ.IDs. 218, 100) ---	1,2,4-7, 10-14,25
X	DATABASE EMBL 'Online! Accession Number W08549, 27 April 1996 (1996-04-27) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:332593." XP002169146 abstract DOC. AGAINST INV. 98 (SEQ.IDs. 219, 101) ---	6,7
X	DATABASE EMBL 'Online! Accession Number AC002355, 24 July 1997 (1997-07-24) HAWKINS T. L. ET AL.: "Homo sapiens chromosome 9 clone 107G20 map 9q34" XP002169147 abstract DOC. AGAINST INV. 99 (SEQ.IDs. 220, 102) ---	1-7
X	DATABASE EMBL 'Online! Accession Number AI606679, 26 April 1999 (1999-04-26) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:516008." XP002169148 abstract DOC. AGAINST INV.100 (SEQ.IDs. 221, 103) ---	6,7
	--- -/--	

INTERNATIONAL SEARCH REPORT

Int .ional Application No
PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! Accession Number AA493011, 2 July 1997 (1997-07-02) MARRA. M. ET AL.: "Mus musculus cDNA clone IMAGE:917574." XP002169149 abstract DOC. AGAINST INV.100 (SEQ.IDs. 221, 103) ---	6,7
X	DATABASE EMBL 'Online! Accession Number AA396601, 28 April 1997 (1997-04-28) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:570118." XP002169150 abstract DOC. AGAINST INV.102 (SEQ.IDs. 223, 105) ---	6,7
E	EP 1 033 401 A (GENSET SA) 6 September 2000 (2000-09-06) SEQ.ID.6560 DOC. AGAINST INV.102 (SEQ.IDs. 223, 105) ---	2,6,7, 11,12
X	DATABASE EMBL 'Online! Accession Number AA276191, 3 April 1997 (1997-04-03) MARRA M. ET AL.: " Mus musculus cDNA clone IMAGE:776192 5' similar t SW:KRBI_VACCC P20505 30 KD prtein kinase homolog." XP002169151 abstract DOC. AGAINST INV.104 (SEQ.IDs. 225, 107) ---	1-4,6-13
X	DATABASE EMBL 'Online! Accession Number AA399022, 29 April 1997 (1997-04-29) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:729929." XP002169312 abstract DOC. AGAINST INV.106 (SEQ.IDs. 227, 109) ---	6,7
X	WO 97 47750 A (IMMUNEX CORP) 18 December 1997 (1997-12-18) the whole document DOC. AGAINST INV.108 (SEQ.IDs. 229, 111) ---	1-14, 25-30, 35-38

-/--

INTERNATIONAL SEARCH REPORT

Int. .ional Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE EMBL 'Online! Accession Number AI298668, 4 December 1998 (1998-12-04) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:1895716 3' similar to SW:NEK1_Mouse P51945 serine/threonine-protein kinase NEK1." XP002169313 abstract DOC. AGAINST INV.108 (SEQ.IDs. 229, 111)</p>	1,2,4-7, 10-14,25
X	<p>WANG X. S. ET AL.: "MAPKKK6, a novel mitogen-activated protein kinase kinase kinase, that associates with MAPKKK5." BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 253, no. 1, 9 December 1998 (1998-12-09), pages 33-37, XP002169311 ISSN: 0006-291X the whole document DOC. AGAINST INV.109 (SEQ.IDs. 230, 112)</p>	1-14,25
X	<p>DATABASE EMBL 'Online! Accession Number AI638161, 29 April 1999 (1999-04-29) STRAUSBERG R.: "Homo sapiens cDNA clone IMAGE:2239185 3' similar to SW:PAK3_Human 075914 serine/threonine-protein kinase." XP002169314 abstract DOC. AGAINST INV.110 (SEQ.IDs. 231, 113)</p>	1,2,4-7, 10-14
P,X	<p>NAGASE T. ET AL.: "PREDICTION OF THE CODING SEQUENCES OF UNIDENTIFIED HUMAN GENES. XV. THE COMPLETE SEQUENCES OF 100 NEW CDNA CLONES FROM BRAIN WHICH CODE FOR LARGE PROTEINS IN VITRO" DNA RESEARCH, vol. 6, 29 October 1999 (1999-10-29), pages 337-345, XP000865804 ISSN: 1340-2838 -& DATABASE EMBL 'Online! Accession Number AB033090, 11 November 1999 (1999-11-11) OHARA O. ET AL.: "Homo sapiens mRNA for KIAA1264 protein." XP002169637 abstract DOC. AGAINST INV.110 (SEQ.IDs. 231, 113)</p>	1-14

-/--

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/14842

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! Accession Number H29272, 19 July 1995 (1995-07-19) HILLIER L. ET AL.: "Homo sapiens cDNA clone IMAGE:49948." XP002169315 abstract DOC. AGAINST INV.111 (SEQ.IDs. 232, 114) ----	6,7
P,X	WO 99 64589 A (ZENECA LTD) 16 December 1999 (1999-12-16) the whole document DOC. AGAINST INV.111 (SEQ.IDs. 232, 114) DOC. AGAINST INV.112 (SEQ.IDs. 233, 115) ----	1-14,23, 26-30, 35-38
X	DATABASE EMBL 'Online! Accession Number AA098024, 27 October 1996 (1996-10-27) MARRA M. ET AL.: "Mus musculus cDNA clone IMAGE:550913 5' similar to SW:DROME P18475 tyrosine-protein kinase receptor torso precursor." XP002169442 abstract DOC. AGAINST INV.112 (SEQ.IDs. 233, 115) ----	1-4, 6-13,23
X	DATABASE EMBL 'Online! Accession Number Z98752, 23 August 1997 (1997-08-23) RAMSAY H.: "Human DNA sequence from clone RP1-138B7 on chromosome 20q13.12." XP002169443 nts. 43893 - 62413 DOC. AGAINST INV.113 (SEQ.IDs. 234, 116) ----	1-14
X	DATABASE EMBL 'Online! Accession Number AF035013, 4 January 1999 (1999-01-04) JIANG Y. AND ZHAO K.: "Homo sapiens cell cycle related kinase mRNA, complete cds." XP002169444 abstract DOC. AGAINST INV.114 (SEQ.IDs. 235, 117) -----	1-14,24

INTERNATIONAL SEARCH REPORT

international application No.
PCT/US 00/14842

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 31-34
because they do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically: Claims Nos. 1-18 (partially), 17 (completely), 19 and 20 (partially), 20 and 22 (completely), 23-38 (partially)
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: Invention 1: Claims 1-14,26-38 (all partially)

A nucleic acid molecule encoding a kinase polypeptide as represented by SEQ.ID.122 or a domain thereof; a vector and a recombinant cell comprising said nucleic acid molecule; a nucleic acid probe for the detection of said nucleic acid molecule; a polypeptide as represented by SEQ.ID.122 or a fragment thereof; an antibody or antibody fragment having specific binding affinity to said polypeptide; a hybridoma which produces said antibody; methods for identifying a substance that modulates the kinase activity of said polypeptide; methods for treating a disease or disorder by administering such a substance; and methods for the detection of a kinase polypeptide as represented by SEQ.ID.122.

2. Claims: Inventions 2-78: Claims 1-20,
23-38 (all partially and as far as applicable)

A nucleic acid molecule encoding a kinase with a polypeptide sequence selected from SEQ.IDs.123-199, wherein invention 2 is limited to SEQ.ID. 123, invention 3 is limited to SEQ.ID. 124,, and invention 78 is limited to SEQ.ID.199, or a domain thereof; a vector and a recombinant cell comprising said nucleic acid molecule; a nucleic acid probe for the detection of said nucleic acid molecule; a polypeptide as represented by a polypeptide sequence selected from SEQ.IDs.123-199 or a fragment thereof; an antibody or antibody fragment having specific binding affinity to said polypeptide; a hybridoma which produces said antibody; methods for identifying a substance that modulates the kinase activity of said polypeptide; methods for treating a disease or disorder by administering such a substance; and methods for the detection of a kinase polypeptide represented by a polypeptide sequence selected from SEQ.IDs.123-199.

3. Claims: Invention 79: Claim 21 (completely) and Claims 1-14,26-38 (all partially)

A nucleic acid molecule encoding a kinase polypeptide as represented by SEQ.ID.200 or a domain thereof; a vector and a recombinant cell comprising said nucleic acid molecule; a nucleic acid probe for the detection of said nucleic acid molecule; a polypeptide as represented by SEQ.ID.200 or a fragment thereof; an antibody or antibody fragment having

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

specific binding affinity to said polypeptide; a hybridoma which produces said antibody; methods for identifying a substance that modulates the kinase activity of said polypeptide; methods for treating a disease or disorder by administering such a substance; and methods for the detection of a kinase polypeptide as represented by SEQ.ID.200.

4. Claims: Invention 80: Claim 22 (completely) and Claims 1-14,26-38 (all partially)

A nucleic acid molecule encoding a kinase polypeptide as represented by SEQ.ID.201 or a domain thereof; a vector and a recombinant cell comprising said nucleic acid molecule; a nucleic acid probe for the detection of said nucleic acid molecule; a polypeptide as represented by SEQ.ID.201 or a fragment thereof; an antibody or antibody fragment having specific binding affinity to said polypeptide; a hybridoma which produces said antibody; methods for identifying a substance that modulates the kinase activity of said polypeptide; methods for treating a disease or disorder by administering such a substance; and methods for the detection of a kinase polypeptide as represented by SEQ.ID.201.

5. Claims: Inventions 81-121: Claims 1-20, 23-38 (all partially and as far as applicable)

A nucleic acid molecule encoding a kinase with a polypeptide sequence selected from SEQ.IDs.202-242, wherein invention 81 is limited to SEQ.ID. 202, invention 82 is limited to SEQ.ID. 203,, and invention 121 is limited to SEQ.ID.242, or a domain thereof; a vector and a recombinant cell comprising said nucleic acid molecule; a nucleic acid probe for the detection of said nucleic acid molecule; a polypeptide as represented by a polypeptide sequence selected from SEQ.IDs.202-242 or a fragment thereof; an antibody or antibody fragment having specific binding affinity to said polypeptide; a hybridoma which produces said antibody; methods for identifying a substance that modulates the kinase activity of said polypeptide; methods for treating a disease or disorder by administering such a substance; and methods for the detection of a kinase polypeptide represented by a polypeptide sequence selected from SEQ.IDs.202-242.

6. Claims: Inventions 122-136: Claims 15-20, 23-25 (all partially) and claims 1-14, 26-38 (if applicable)

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

A nucleic acid molecule encoding a kinase polypeptide as represented by a 'gene name' selected from 'AA980090', 'AA045601', 'AA297313', 'N23936', '5R72-18-1', '5R79-54-1', '5R65-16-1', 'AA065538', 'H17727', 'W08549', 'AA430250', 'AA139478', 'R87679', 'W65887', 'AA948538', '5R69-23-3', and '5R69-26-2', wherein invention 122 is limited to 'AA980090', invention 123 is limited to 'AA045601', and invention 136 is limited to '5R69-26-2', or a domain thereof; a vector and a recombinant cell comprising said nucleic acid molecule; a nucleic acid probe for the detection of said nucleic acid molecule; a polypeptide encoded by said nucleic acid molecule or a fragment thereof; an antibody or antibody fragment having specific binding affinity to said polypeptide; a hybridoma which produces said antibody; methods for identifying a substance that modulates the kinase activity of said polypeptide; methods for treating a disease or disorder by administering such a substance; and methods for the detection of a said polypeptide.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 31-34

The search was based on the sequence listing furnished in computer readable form, the numbering of which differs from the numbering in the figures.

Claims 31-34 refer to a 'substance that modulates the activity of a kinase' without giving a true technical characterization. Moreover, no such specific compounds are defined in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is not sufficiently disclosed and supported (Art. 5 and 6 PCT). No search can be carried out for such purely speculative claims whose wording is, in fact, a mere recitation of the results to be achieved.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/14842

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0058473 A	05-10-2000	AU 3774500 A	16-10-2000
WO 0006728 A	10-02-2000	AU 5134999 A EP 1100904 A	21-02-2000 23-05-2001
WO 9858052 A	23-12-1998	US 5885803 A AU 8154798 A EP 1007692 A US 6207148 B	23-03-1999 04-01-1999 14-06-2000 27-03-2001
WO 0055332 A	21-09-2000	AU 3899600 A AU 5034200 A WO 0071679 A	04-10-2000 12-12-2000 30-11-2000
WO 9733909 A	18-09-1997	AU 728186 B AU 2329597 A BR 9708082 A CA 2249742 A EP 0914335 A NO 984229 A US 6034218 A	04-01-2001 01-10-1997 27-07-1999 18-09-1997 12-05-1999 13-11-1998 07-03-2000
WO 9957144 A	11-11-1999	AU 3885999 A EP 1075518 A	23-11-1999 14-02-2001
WO 9811234 A	19-03-1998	US 5773699 A US 5863780 A AU 4261197 A EP 0927257 A US 6045792 A US 6232077 B	30-06-1998 26-01-1999 02-04-1998 07-07-1999 04-04-2000 15-05-2001
EP 0861896 A	02-09-1998	DE 19708173 A CA 2224404 A JP 10248566 A	03-09-1998 28-08-1998 22-09-1998
WO 0035946 A	22-06-2000	NONE	
WO 9831802 A	23-07-1998	AU 6031398 A EP 0972026 A	07-08-1998 19-01-2000
WO 9950395 A	07-10-1999	NONE	
WO 9933961 A	08-07-1999	AU 1691499 A	19-07-1999
WO 9801756 A	15-01-1998	US 5863729 A AU 3651597 A	26-01-1999 02-02-1998
WO 9949062 A	30-09-1999	AU 3208999 A EP 1073756 A	18-10-1999 07-02-2001
WO 9835015 A	13-08-1998	EP 0972011 A US 5968800 A US 6030788 A	19-01-2000 19-10-1999 29-02-2000
WO 9938981 A	05-08-1999	US 5962232 A AU 2113899 A EP 1051497 A	05-10-1999 16-08-1999 15-11-2000

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/14842

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9836054 A	20-08-1998	AU 5973498 A	08-09-1998
WO 9958558 A	18-11-1999	AU 4077099 A EP 1078057 A	29-11-1999 28-02-2001
US 6013455 A	11-01-2000	AU 1315900 A WO 0022143 A	01-05-2000 20-04-2000
EP 0870825 A	14-10-1998	US 5965420 A CA 2231046 A JP 11000179 A US 6165766 A	12-10-1999 05-09-1998 06-01-1999 26-12-2000
WO 9405794 A	17-03-1994	EP 0658204 A US 5690930 A	21-06-1995 25-11-1997
WO 0009678 A	24-02-2000	AU 5491599 A	06-03-2000
WO 0014212 A	16-03-2000	US 6183962 B AU 5817799 A US 6043040 A US 6146841 A US 6180358 B US 6153417 A US 6146832 A US 6190874 B US 6121030 A US 6200770 B US 6214597 B	06-02-2001 27-03-2000 28-03-2000 14-11-2000 30-01-2001 28-11-2000 14-11-2000 20-02-2001 19-09-2000 13-03-2001 10-04-2001
WO 9904265 A	28-01-1999	US 6218521 B US 6043084 A AU 8571598 A EP 0996857 A	17-04-2001 28-03-2000 10-02-1999 03-05-2000
WO 0022143 A	20-04-2000	US 6013455 A AU 1315900 A	11-01-2000 01-05-2000
WO 9932609 A	01-07-1999	AU 1991799 A AU 1991899 A EP 1037920 A WO 9932517 A	12-07-1999 12-07-1999 27-09-2000 01-07-1999
EP 1033401 A	06-09-2000	NONE	
WO 9747750 A	18-12-1997	AU 718792 B AU 3284297 A EP 0914451 A JP 2000512147 T NO 985742 A	20-04-2000 07-01-1998 12-05-1999 19-09-2000 10-02-1999
WO 9964589 A	16-12-1999	AU 4278299 A EP 1084245 A	30-12-1999 21-03-2001

This Page Blank (uspto)